

INTRODUCTION TO INSULATING CONCRETE FORMS



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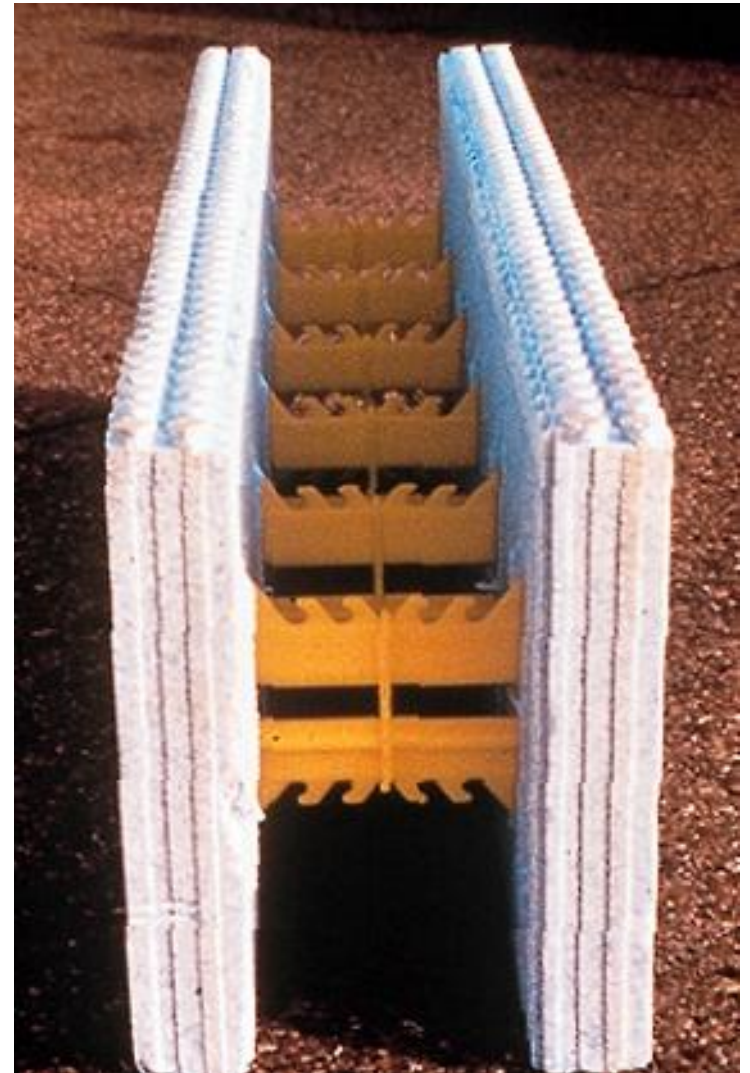
WALL FUNCTIONS

Structure

Insulation

Finish Attachment

Chase for utilities



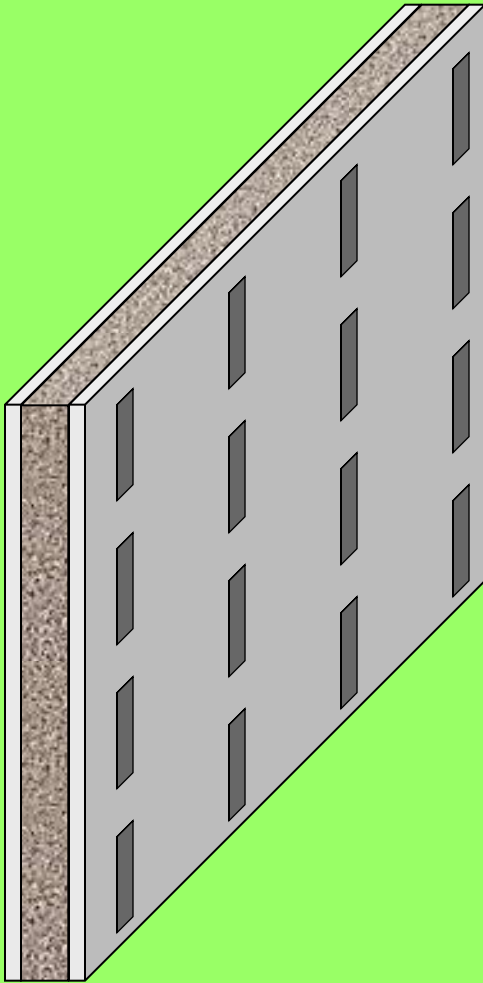
Typical ICF Wall

100% insulation (R- 18 to 22)

100% monolithic structure

Integral furring

Fully insulated chase cavity



COMPONENTS

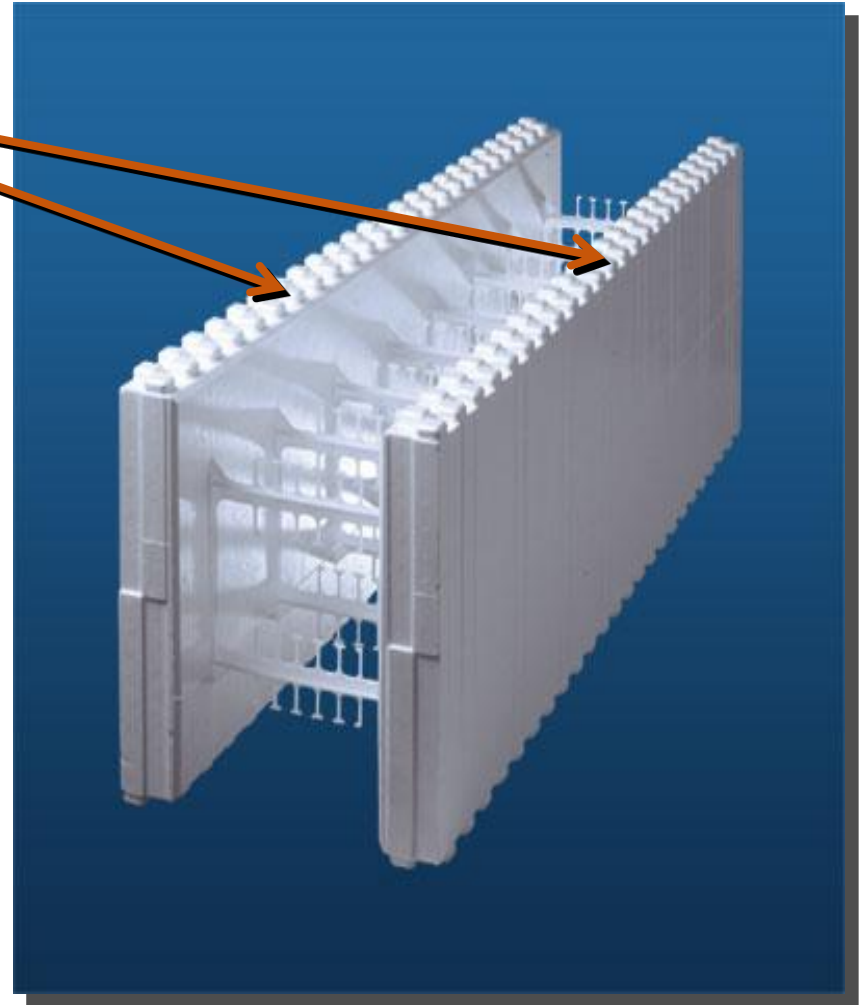
Face Shell

2 to 2.5" thick

R- 18 to R-22

EPS or XPS

Withstands internal
pressure of concrete
during placement



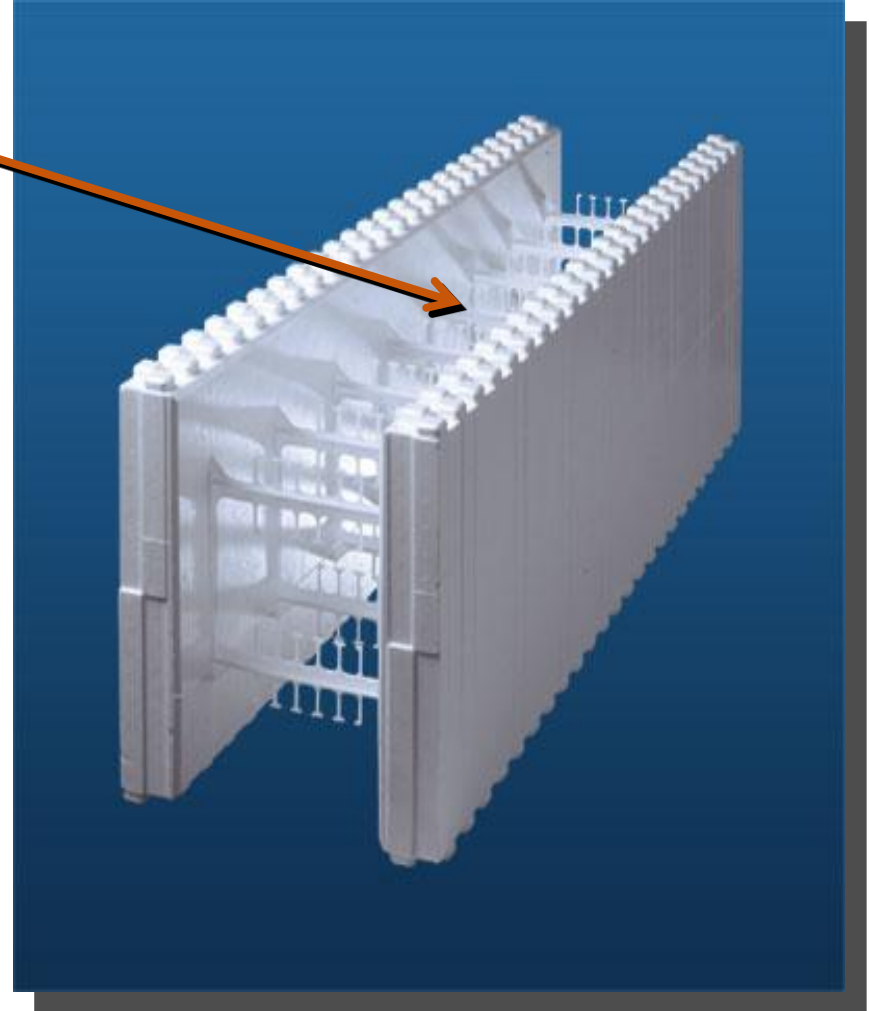
COMPONENTS

Form Tie

Plastic or metal

6" to 12" o.c.

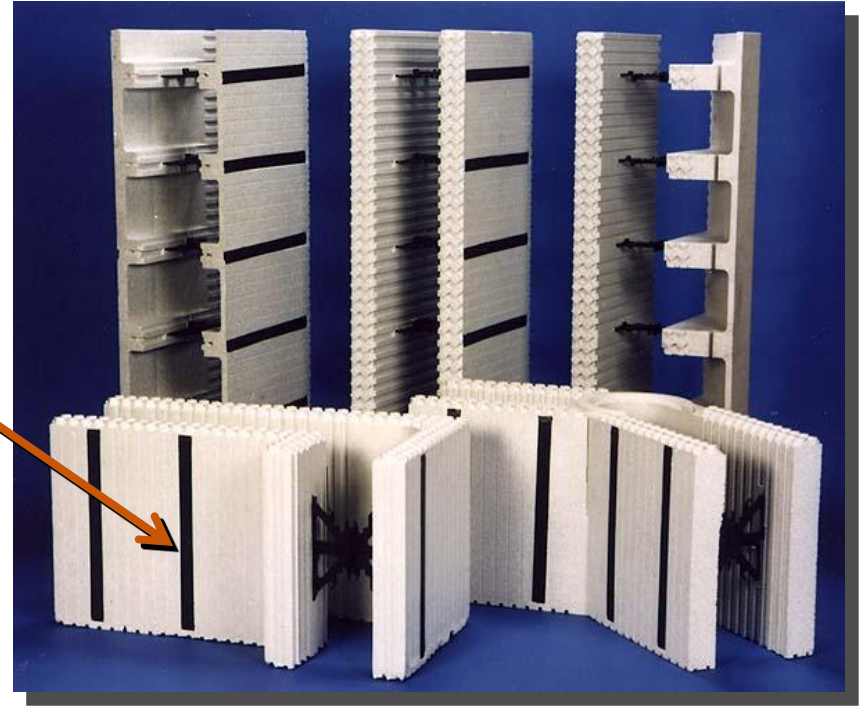
Rebar saddles



COMPONENTS

Form Tie Face

Tie face for attachment of finishes can be exposed or recessed



COMPONENTS

Reinforced Concrete Core

4", 6" or 8" thick

10"+ in 2" increments

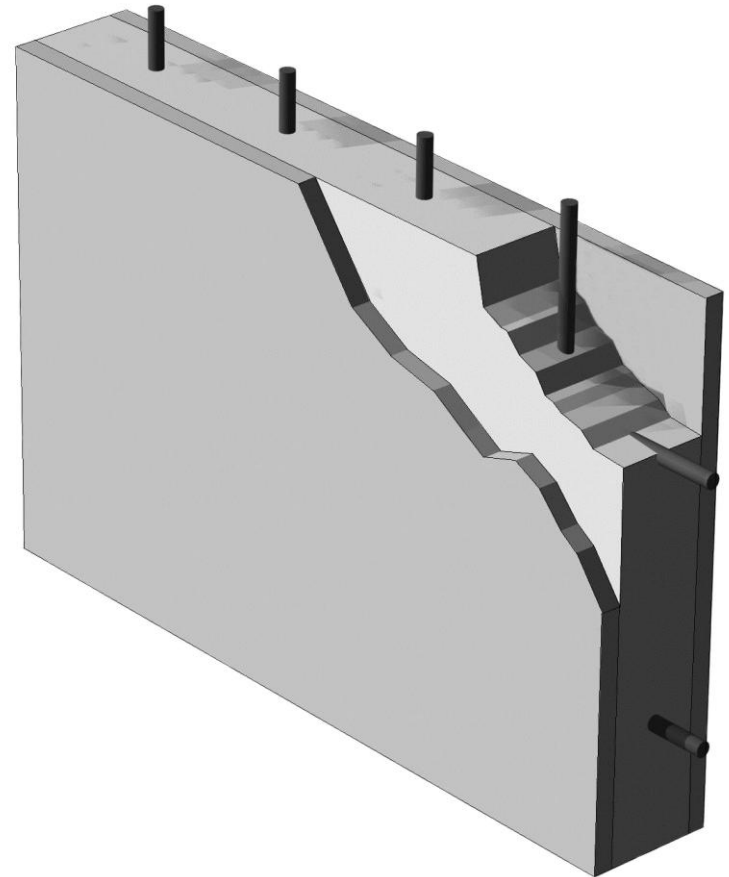
Monolithic,

2,500 to 4,000 psi

6" slump

3/8" aggregate

Rebar = 40 or 60 ksi



QUIET COMFORT



ICFs Have High STC Ratings
6" ICF wall = 57

Collaborative for High-
Performance Schools study
shows as noise is reduced
inside classrooms, test scores
increase

END RESULT

Exterior shell with:

Superior strength

Thermal performance

High R-value

Thermal mass

Virtually no thru wall infiltration

Acoustical attenuation

Disaster resistance

Low Maintenance



ICF HISTORY

- EPS was created by the German chemical company BASF in 1940s.



- Werner Gregori created the foam ICF concept in the mid 1960's as a foundation material, and submitted patents in 1966.



- Currently, 70% of the ICF market is residential and 30% is commercial

SCHOOLS



SAFETY





THANK YOU